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Translation

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference B14166.3PV	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR2003/002093	International filing date (day/month/year) 04 juillet 2003 (04.07.2003)	Priority date (day/month/year) 05 juillet 2002 (05.07.2002)
International Patent Classification (IPC) or national classification and IPC C30B 33/00, H01L 21/02, 51/20		
Applicant COMMISSARIAT A L'ENERGIE ATOMIQUE		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 21 janvier 2004 (21.01.2004)	Date of completion of this report 24 September 2004 (24.09.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FR2003/002093

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

☐ the international application as originally filed.

☒ the description, pages 1-27, as originally filed,
pages _____, filed with the demand,
pages _____, filed with the letter of _____,
pages _____, filed with the letter of _____.

☒ the claims, Nos. 1-29, as originally filed,
Nos. _____, as amended under Article 19,
Nos. _____, filed with the demand,
Nos. _____, filed with the letter of _____,
Nos. _____, filed with the letter of _____.

☒ the drawings, sheets/fig 1/4-4/4, as originally filed,
sheets/fig _____, filed with the demand,
sheets/fig _____, filed with the letter of _____,
sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	6, 9-11, 15, 19-24, 26-29	YES
	Claims	1-5, 7, 8, 12-14, 16-18, 25	NO
Inventive step (IS)	Claims	6, 9-11, 15, 19-24, 27-29	YES
	Claims	26	NO
Industrial applicability (IA)	Claims	1-29	YES
	Claims	none	NO

2. Citations and explanations

1. Reference is made to the following documents:

D1: FR-A-2 757 183 (COMMISSARIAT ENERGIE ATOMIQUE)
19 June 1998 (1998-06-19) (cited in the
application);

D2: FR-A-2 786 794 COMMISSARIAT ENERGIE ATOMIQUE)
9 June 2000 (2000-06-09) (cited in the
application).

2. The present application does not fulfil the requirements set forth in PCT Article 33(1) because the subject matter of claims 1-5, 7, 8, 12-14, 16-18 and 25 does not comply with the requirement of novelty defined in PCT Article 33(2).

2.1 Document D1 describes (see figure 1 and page 16, lines 8-17; the references between parentheses apply to said document):

an assembly of nano-objects, in particular, atomic wires, one-dimensional nanostructures and quantum dots, which assembly is characterised in that said nano-objects are made of a metal (see page 16, lines

10-11) and are formed on the surface (6) of a single-crystal semiconductor substrate.

It follows that the subject matter of claim 1 is not novel (PCT Article 33(2)). In this regard, it should be noted that the expression "in particular" is considered to introduce an optional feature that has no limiting effect on the scope of the claim (the PCT International Search and Preliminary Examination Guidelines, §5.40).

- 2.2 Dependent claims 2-5, 7 and 8 do not contain any features which, in combination with the features of any one of the claims to which they refer, might define subject matter that fulfils the PCT requirements of novelty and/or inventive step, for the following reasons:

The features in claims 2-5, 7 and 8 are described in D1 (PCT Article 33(2)).

- 2.3 Document D1 describes (see figure 1 and page 16, lines 12-17; the references between parentheses apply to said document):

a method for producing an assembly of nano-objects, wherein a surface (6) of a single-crystal semiconductor substrate is prepared and a metal is deposited on the resulting prepared surface.

It follows that the subject matter of claim 12 is not novel (PCT Article 33(2)).

- 2.4 Dependent claims 12-14, 16-18, 25 and 26 do not contain any features which, in combination with the

features of any one of the claims to which they refer, might define subject matter that fulfils the PCT requirements of novelty and/or inventive step, for the following reasons:

The features in claims 12-14, 16-18 and 25 are described in D1 (PCT Article 33(2)).

The features in dependent claim 26 have already been used for the same purpose in a similar method (see D2, page 4, line 29 to page 5, line 7). It would be obvious for a person skilled in the art to use these features with a corresponding effect in a method as per document D1 and thereby arrive at a method as per claim 26 (PCT Article 33(3)).

3. Claims 1-29 fulfil the requirement of industrial applicability set forth in PCT Article 33(4).

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